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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,589	12/13/2006	Anne-Sophie Bessis	65517(53196)	9455

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EXAMINER	
SOLOLA, TAOFIQ A	

ART UNIT	PAPER NUMBER
1625	

MAIL DATE	DELIVERY MODE
03/31/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,589	BESSIS ET AL.	
	Examiner	Art Unit	
	Taofiq A. Solola	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-18,20-30 and 33-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-18,20,41 and 42* is/are allowed.

6)☒ Claim(s) *21-30,33-40 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/21/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 16-18, 20-30, 33-43, are pending in this application.
Claims 1-15, 19, 31-32, are deleted.

Rejoinder

Applicant has requested the rejoinder of non-elected claims 21-30, 33-40, 43. Such is deemed an amendment under the Rule of Rejoinder. The restriction of the claims is now withdrawn.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-30 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Under US patent practice, a use claim without setting forth the steps involved in the process is an improper definition of a process, under 35 U.S.C. See *Ex parte Dunki*, 153 USPQ 678 (Bd. App, 1967) and *Clin. Products v. Brenner,* 149 USPQ 475 (D.D.C., 1966). By deleting the claims the rejection would be overcome.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-30, 33-40, 43, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 21-22 are drawn to mechanism by which the compounds work in the body: treatment of a disease affected by neuromodulatory effect of mGluR5. This is not a practical

utility under the US patent practice. To ascertain the practical utility, one must read the specification into the claims contrary to several precedent decisions by US courts and Official practice. Even then, the claims would become duplicates of 33-40. Under the US patent practice duplicates or substantial duplicates claims cannot be in the same application. The claims are attempts by applicant to claim treatment of all diseases known today and that may be discovered in the future, associated with the mechanism. They are reach-through claims and are no longer patentable under the US patent practice. A claim must stand alone to define the invention, and incorporation into the claims by reference to the specification or an external source is not permitted. *Ex parte Fressola,* 27 USPQ 2d 1608, BdPatApp & Inter. (1993). By deleting the claims the rejection would be overcome.

Claims 21-30, 33-40, 43 lack adequate supports in the specification. The claims are drawn to prevention or treating patent who are susceptible to various diseases. No routine procedure is disclosed in the specification on how to identify and treat patents that are susceptible to each disease so as to prevent the occurrence of the disease.

The specification fails to set forth the process of how the compounds are used to prepare a tracer (claim 43). Under the US patent practice, the specification must disclose "how" to prepare a product.

Claims 21-30, 33-40, 43, are rejected under 35 U.S.C. 112, first paragraph, because the specification does not reasonably provide enablement for the claimed and the diseases. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

"'In the context of determining whether sufficient "utility as a drug, medicant, and the like in human therapy" has been alleged, it is proper for the examiner to ask for substantiating

evidence unless one with ordinary skill in the art would accept the [compounds and the utilities] as obviously correct.'" *In re Jolles*, 628 F.2d 1327, 1332 (Fed. Cir. 1980), citing *In re Novak*, 306 F.2d 924 (CCPA 1962); see 340 F.2d 974, 977-78 (CCPA 1965).

"A specification disclosure which contains a teaching of the manner and process of making and using the invention . . . must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." *In re Brana*, 51 F.3d 1560 (Fed. Cir. 1995), Id. at 1566, quoting *Marzocchi*, 439 F.2d 220, 223 (CCPA 1971); *Fiers v. Revel,* 984 F.2d 1164, 1171-72 (Fed. Cir. 1993), quoting *Marzocchi*, 439 F.2d at 223; see also *Armbruster*, 512 F.2d 676, 677 (CCPA 1975); *Knowlton*, 500 F.2d 566, 571 (CCPA 1974); *Bowen*, 492 F.2d 859 (CCPA 1974); *Hawkins*, 486 F.2d 569, 576 (CCPA 1973).

Where there is "no indication that one skilled in the art would accept without question [the instant compounds and method of use] and no evidence has been presented to demonstrate that the claimed products do have those effects *Novak*, 306 F.2d at 928, an applicant has failed to sufficiently demonstrate sufficient utility and therefore cannot establish enablement.'" *In re Rasmusson,* 75 USPQ2d 1297 (CAFC 2005). The claimed invention is not enabled without undue experimentation for the following reasons:

For rejection under 35 U.S.C. 112, first paragraph, the following factors must be considered. *In re Wands*, 8 USPQ2d 1400, 1404 (CAFC, 1988): "The factors to be considered [in making an enablement rejection] have been summarized as a) the breadth of the claims, b) the amount of direction or guidance presented, c) the presence or absence of working examples, d) the nature of the invention, e) the state of the prior art, f) the relative skill of those in that art, g) the predictability or unpredictability of the art, h) and, the quantity of experimentation necessary, *In re Rainer*, 146 USPQ 218 (1965); *In re Colianni*, 195 USPQ 150,

Ex prate Formal, 230 USPQ 546. The breadth of the claims includes many compounds. The compounds embraced by the claims are so numerous and are in the hundreds. The nature of the invention is using the compounds as pharmaceuticals. The utilities listed in claims 21-30, 33-40, are deemed speculations because there are no assays, explanations and conclusions thereof establishing nexus between the compounds and the utilities. Several prior arts are listed but they relate to compounds other than the instant compounds. Many of the diseases are symptoms of other diseases, e.g. dementia due to HIV. Treating a symptom is not the same as treating the underlying disease.

Each of the diseases in the claims are from various sources or mechanisms, and applicant fails to provide evidence the compounds would treat each disease arising from the various sources.

The state of the prior art is that enzymes react in a lock and key mechanism and the structure of the compound must be specific. The presence of methyl instead of H changes the binding of a compound with an enzyme. For example, theophylline and caffeine differ by a methyl group but one is used as a bronchodilator while the other is not used as a pharmaceutical. Hence, there is no absolute predictability or established correlation between different substituents on a core that they would behave in a certain way. The uncertainty presents one of ordinary skill in the art with obstacles and prevents her from accepting any therapeutic regimen on its face. The level of ordinary skill in the art of pharmaceutical art is high. The level of unpredictability in pharmaceutical art is very high, e.g. theophylline v. caffeine. It is well established that "the scope of enablement varies inversely with the degree of unpredictability of the factors involved" and physiological activity is generally considered to be an unpredictable factor. See *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970).

The claims are drawn to "preventing," "or treating patent who are susceptible to" various diseases. However the specification fails to disclose a routine procedure to identify "normal" people who would develop the diseases, and how such would be treated so as not to develop diseases and/or delay the onset of the diseases. Therefore, to make and use the instant invention, one of ordinary skill in the art would have to perform significant amount of experimentations. Such is deemed undue experiment under the US patent practice.

On pages 1-4 applicant cites several prior arts on studies with other compounds, which are structurally different from the instant compounds. This is not the same as enablement of the instant compounds. See MPEP 608.01(p) and 37 CFR 1.57(b)(1). Applicant should note that enablement requirement is an '"essential material'. See 37 CFR 1.57(c), 1.57(c)(1) to (3), and MPEP 608.01(p), which states as follows:

A mere reference to another application, publication or patent is not an incorporation of anything therein into the application containing such reference for the purpose of satisfying the requirement of 35 USC 112, first paragraph. *In re de Seversky,* 474 F.2d 671, 177 USPQ 144 (CCPA 1973). Particular attention should be directed to the subject matter and the specific portions of the referenced document where the subject matter being incorporated may be found.

It is quite possible that a mutation in the gene for the protein responsible for mGluR5 receptor production may lead to increase or decrease levels. To use the invention of claim 21-22, one of ordinary skill in the art would have to perform experimentation in every instance to determine if the increase or decrease or decrease is due to genetic mutation in a patient or not. After prospective patients are identified and treated, assays must be performed on each one to determine if treatment is successful. Such is deemed undue experiment under the US patent practice. Even then, the specification fails to disclose a routine procedure to perform such

assay. Therefore, to make and use the instant invention, one of ordinary skill in the art would have to perform significant amount of experimentation.

The specification discloses assays on mGluR5 on pages 102-106. However, no correlation is established between the assays and each disease. There are no results of the assays or explanation of the result linking each of them with claimed utility. Given the limited guidance in the specification one of ordinary skill in the art would have to perform significant amount of experiments to make and use the invention as claimed. Such is deemed undue experiment under the US patent practice.

There is no absolute predictability or established correlation between the claims and the specification disclosures. The uncertainty presents one of ordinary skill in the art with obstacles and prevents her from accepting the invention on its face. Predictability in the art refers to the ability of one skilled in the art to extrapolate the disclosed or known results to the claimed invention. In the instant invention, there is no direction or guidance by applicant because assays are not performed for establishing nexus between the assays' result and each disorder. The specification cites several references but none of the references disclosed conclusive evidence of relationships between the instant compounds and the claimed utilities. Therefore, there is no evidence in the specification that established correlation between the disclosure and the instantly claimed invention. *See Ex parte Mass*, 9 USPQ2d 1746, (1987). Also, for the reason set forth above under 35 USC 112, first paragraph, claim 43 lacks enablement.

MPEP 2164.01(a) states, "[a] conclusion of lack of enablement means that, based on the evidence regarding any of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. *In re Wright*, 999 F.2d 1557, 1562, 27

USPQ2d 1510, 1513 (Fed. Cir. 1993)." That conclusion is clearly justified here. By deleting the claims the rejection would be overcome.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 23-30, 43, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim [23-30] does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, e.g. claim 23, recites "nervous system disorders" the broad recitation of "anxiety disorders" and the claim also recites "agoraphobia . . . substance-induced anxiety disorder," which are the narrower statement of the range/limitation.

Claim 43 fails to set forth the process steps of how the compounds are used in preparing a tracer. Under the US patent practice, a claim drawn to a process of making a product must set forth the steps of "how" to prepare the product.

Allowable Subject Matter

Claims 16-18, 41-42, are allowable over prior arts of record.

IDS

Reference CF and CG are not considered due to lack of publication dates. Also, CF is not translated to English Language.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taofiq A. Solola, PhD. JD., whose telephone number is (571) 272-0709.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, can be reached on (571) 272-0867. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

/Taofiq A. Solola/

Primary Examiner, Art Unit 1625

March 25, 2010